USGS
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Earthquake
Shaking

Green
Alert

GSN
USAID
FROM THE AMERICAN PEOPLE
ANSS

M 5.4, 76 km SSW of Laojunmiao, China

PAGER
Version 3

Origin Time: 2023-12-01 14:55:56 UTC (Fri 20:55:56 local)
Location: 39.2438° N 97.2769° E Depth: 10.0 km

Created: 1 day, 0 hours after earthquake

Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

65%
30%
4%

1   10   100   1,000   10,000   100,000
Fatalities

Estimated Economic Losses

81%
18%

1   10   100   1,000   10,000   100,000
USD (Millions)
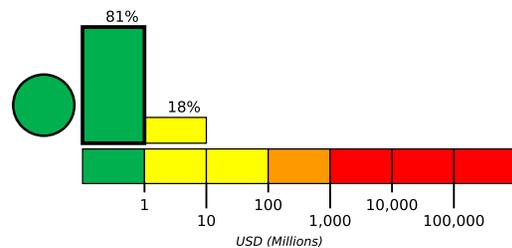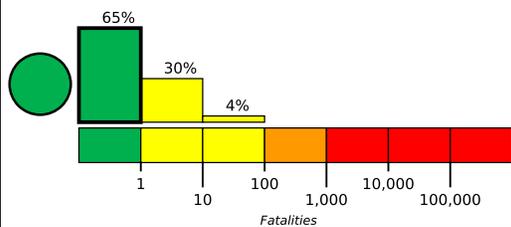
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		—*	1,010k*	254k	1k	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		**I**	**II-III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X+**
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

0	5	50	100	500	1000	5000	10000
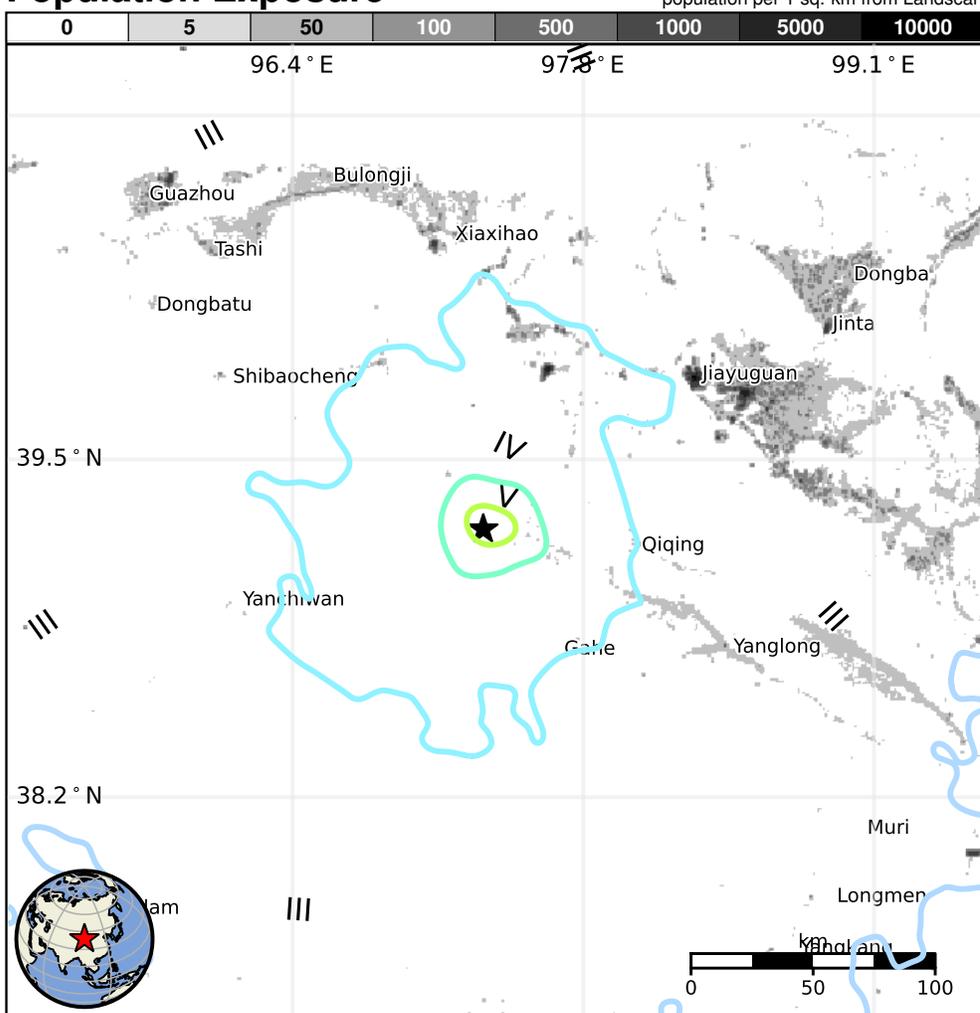
Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are adobe block and unreinforced brick with mud construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2002-12-14	57	5.5	VI(102k)	2
2003-10-25	336	5.8	VIII(9k)	—
2003-10-25	334	5.8	VIII(6k)	9

Selected City Exposure

from GeoNames.org

MMI	City	Population
IV	Yu'erhong	<1k
IV	Chijin	<1k
IV	Changma	<1k
IV	**Qiqing**	**<1k**
IV	Yumendong	<1k
IV	Laojunmiao	85k
IV	**Gahe**	**<1k**
IV	**Jiayuguan**	**122k**
IV	Yumen	<1k
III	**Xiaxihao**	**<1k**
III	Jiuquan	73k

bold cities appear on map.   (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/us7000lf3c#pager

Event ID: us7000lf3c